



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/823,033

04/13/2004

Kaiping Lee

IFF-79

3381

48080

7590

11/24/2009

INTERNATIONAL FLAVORS & FRAGRANCES INC.
521 WEST 57TH ST
NEW YORK, NY 10019

EXAMINER

GODENSCHWAGER, PETER F

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

11/24/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/823,033	Applicant(s) LEE ET AL.	
	Examiner PETER F. GODENSCHWAGER	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 August 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 11-26, 29-31 and 33-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 11-26, 29-31 and 33-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1796

DETAILED ACTION

Applicant's reply filed August 11, 2009 has been fully considered. Claims 1-3, 11-22, 24-26, 29-31, and 33-35 are amended, claims 4-10, 27, 28, 32, 36, and 37 are canceled, and claims 1-3, 11-26, 29-31, and 33-35 are pending.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-3, 11, 14, 15, 18, 22, 23, 26, 29-31, and 33-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heibel et al. (US Pub. No. 2003/0045447) in view of Newell (US Pat. No. 4,374,125) and Schilling (GB Pat. No. 1,561,389).

Art Unit: 1796

Regarding Claims 1-3, 11, 14, 15, and 29-31: Heibel et al. teaches a composition comprising 80-96% of a non-confined liquid phase (water, a solvent) comprising a fragrance agent that does not comprise solid particles, and 4-20% of encapsulating shell material (microcapsules) with a diameter of 0.9 to 10 microns and is composed of a polymer, where the microcapsules comprise a liquid core comprising a perfume in 1-50%. ([0030]-[0037], [0042]) Heibel et al. further teaches the active agent/perfume is emulsified (an emulsifier) ([0037]).

Heibel et al. does not teach that the emulsifier in 0.5% to 100%, 1% to about 10%, or 2.5% by weight of the perfume. However, it is common practice in the art to optimize result effective variables such as the amount of emulsifier in an emulsion. At the time of the invention, a person of ordinary skill in the art would have found it obvious to optimize the relative amount of emulsifier and would have been motivated to do so render the most stable emulsion.

Heibel et al. does not teach that the emulsifier is polyoxyethylene (20) sorbitan monolaurate. However, Newell teaches the use of TWEEN 20 (polyoxyethylene (20) sorbitan monolaurate) as a perfume solubilizer (emulsifier) in an aqueous composition (2:10-15 and 3:50-60). Heibel et al. and Newell are analogous art because they are concerned with solving a problem of similar technical difficulty, namely incorporation of perfumes into aqueous compositions. At the time of the invention, a person of ordinary skill in the art would have found it obvious to use the TWEEN 20 (polyoxyethylene (20) sorbitan monolaurate) of Newell in the composition of Heibel et al. and would have been motivated to do so because Newell teaches that it is effective in solubilizing perfumes in aqueous compositions (2:10-15 and 3:50-60) and Heibel et al. teaches that emulsifiers are present in the composition ([0037]).

Art Unit: 1796

Heibel et al. is silent as to the wall thickness of the microcapsules. However, Schilling teaches a fabric treating composition comprising microcapsules with a liquid core having a shell thickness of 0.4 to 4 microns (Pg. 1, Lns. 1-10; Pg. 3, Lns. 35-40) (overlapping with sufficient specificity the claimed ranges of 0.001 to 100 microns, 0.005 to 10 microns, and 0.2 to 2.0 microns). Heibel et al. and Shilling are analogous art because they are concerned with the same field of endeavor, namely fabric treating compositions comprising urea-formaldehyde based polymer microcapsules with liquid cores. At the time of the invention, a person of ordinary skill in the art would have found it obvious to use the wall thickness of Schilling in the composition of Heibel et al. and would have been motivated to do so because Schilling teaches that such a wall size is critical in ensuring that the capsules are friable, i.e. can be ruptured when attached to fabric to release the benefit agent contained inside (Pg. 1, Lns. 1-10; Pg. 3, Lns. 40-50).

The Examiner recognizes that all of the claimed physical properties are not positively taught by the reference, namely the viscosity of the suspension and the relationship between time and the stability of the viscosity value (instant claims 1-3 and 31). However, the references together render obvious all of the claimed ingredients, process steps, and process conditions of the composition. Therefore, the claimed physical properties would inherently be achieved by the composition as claimed and rendered obvious. If it is the applicant's position that this would not be the case: (1) evidence would need to be presented to support applicant's position; and (2) it would be the Examiner's position that the application contains inadequate disclosure that there is no teaching as to how to obtain the claimed properties with only the claimed ingredients, process steps and process conditions.

Art Unit: 1796

Regarding Claim 18: Claim 18 is being interpreted as a product-by-process claim and therefore directed towards the product itself and not the method of making the product. “[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) [See MPEP 2113].

Regarding Claims 22 and 23: Heibel et al. further teaches adding an additional surfactant in 8.000 wt% ([0055]-[0059] and Table 1).

Regarding Claim 26: Heibel et al. further teaches the composition in a fabric softener (added to a fabric softener) ([0020]).

Regarding Claims 33-35: The Examiner recognizes that all of the claimed physical properties are not positively taught by the reference, namely resulting droplet size of the oil phase of the suspension. However, the references together render obvious all of the claimed ingredients, process steps, and process conditions of the composition. Therefore, the claimed physical properties would inherently be achieved by the composition as claimed and rendered obvious. If it is the applicant’s position that this would not be the case: (1) evidence would need to be presented to support applicant’s position; and (2) it would be the Examiner’s position that the application contains inadequate disclosure that there is no teaching as to how to obtain the claimed properties with only the claimed ingredients, process steps and process conditions.

Art Unit: 1796

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Heibel et al. (US Pub. No. 2003/0045447) in view of Newell (US Pat. No. 4,374,125) and Schilling (GB Pat. No. 1,561,389) as applied to claim 1 above, and further in view of Hoshi et al. (GB Pub. No. 2,062,570).

Heibel et al. in view of Newell and Schilling render the composition of claim 1 obvious as set forth above.

Heibel et al. does not teach the microcapsules comprised of an acrylic acid copolymer cross-linked with a melamine-formaldehyde pre-condensate. However, Hoshi et al. teaches microcapsules for encapsulating perfumes where the shell is comprised of a melamine-formaldehyde pre-polymer (pre-condensate) membrane with an acrylic acid-styrenesulfonic acid copolymer heated and incorporated within the membrane (cross-linked) (abstract, Pg. 2, Lns. 30-45; Pg. 4, Lns. 15-20; and Claim 1 of Hoshi et al.). Heibel et al. and Hoshi et al. are analogous art because they are concerned with the same field of endeavor, namely formaldehyde polymer based microcapsules for encapsulating components such as perfumes. At the time of the invention, a person of ordinary skill in the art would have found it obvious to use the melamine-formaldehyde pre-polymer (pre-condensate) membrane with an acrylic acid-styrenesulfonic acid copolymer of Hoshi et al. as the polymer for the microcapsule of Heibel et al. and would have been motivated to do so because Hoshi teaches that it allows for encapsulation to be carried out at high concentration without aggregation and the cost of encapsulation is low (Pg. 2, Lns. 20-40).

Art Unit: 1796

Claims 13, 16, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heibel et al. (US Pub. No. 2003/0045447) in view of Newell (US Pat. No. 4,374,125) and Schilling (GB Pat. No. 1,561,389) as applied to claim 11 above, and further in view of Soper et al. (US Pat. No. 6,106,875).

Heibel et al. in view of Newell and Schilling render the composition of claim 11 obvious as set forth above.

Heibel et al. does not teach the composition where the solvent is mineral oil or has a C log₁₀P of greater than 10. However, Soper et al. teaches diluting (solvating) fragrance oils to be encapsulated with mineral oil (solvent with C log₁₀P greater than 10) (2:45-55). Heibel et al. and Soper et al. are analogous art because they are concerned with the same field of endeavor, namely encapsulation of fragrances. At the time of the invention, a person of ordinary skill in the art would have found it obvious to use the mineral oil of Soper et al. with the composition of Heibel et al. and would have been motivated to do so because Soper et al. teaches that it allows the fragrance to be encapsulated more easily (2:45-55).

Claims 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heibel et al. (US Pub. No. 2003/0045447) in view of Newell (US Pat. No. 4,374,125) and Schilling (GB Pat. No. 1,561,389) as applied to claim 1 above, and further in view of Popplewell et al. (US Pub. No. 2005/0112152).

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37

Art Unit: 1796

CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention “by another”; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(l)(1) and § 706.02(l)(2).

Heibel et al. in view of Newell and Schilling render the composition of claim 1 obvious as set forth above.

Heibel et al. does not teach the composition comprising at least 20 weight percent of a sacrificial solvent such as benzyl acetate and n-octanol where the sacrificial solvent diffuses from the inside of the capsule to the outside. However, Popplewell et al. teaches encapsulated fragrances comprising at least 20 weight percent of sacrificial solvent such as benzyl acetate and n-octanol where at least 20 weight percent of the solvent diffuses from the inside of the capsule to the outside ([0070]-[0077] and claim 19 of Popplewell et al.). Heibel et al. and Popplewell et al. are analogous art because they are concerned with the same field of endeavor, namely encapsulating fragrance compounds. At the time of the invention, a person of ordinary skill in the art would have found it obvious to use the sacrificial solvent of Popplewell et al. in the composition of Heibel et al. and would have been motivated to do so because Popplewell et al.

Art Unit: 1796

teaches that the capsules can be prepared in large quantities and can be prepared without having to encapsulate each specific fragrance ([0079]).

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Heibel et al. (US Pub. No. 2003/0045447) in view of Newell (US Pat. No. 4,374,125) and Schilling (GB Pat. No. 1,561,389) as applied to claim 1 above, and further in view of Boeckh et al. (US Pub. No. 2003/0171246).

Heibel et al. in view of Newell and Schilling render the composition of claim 1 obvious as set forth above.

Heibel et al. does not teach cationically modifying the capsules with a cationic polymer. However, Boeckh et al. teaches coating particles with cationic polymers for laundry treatment ([0004], [0008]). Heibel et al. and Boeckh et al. are analogous art because they are concerned with the same field of endeavor, namely laundry treatment agents. At the time of the invention, a person of ordinary skill in the art would have found it obvious to use the cationic polymer treatment of Boeckh et al. with the microcapsules of Heibel et al. and would have been motivated to do so because Boeckh et al. teaches that in general the cationic polymers increase deposition and retention ([0004]).

Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Heibel et al. (US Pub. No. 2003/0045447) in view of Newell (US Pat. No. 4,374,125) and Schilling (GB Pat. No. 1,561,389) as applied to claim 1 above, and further in view of Yamato et al. (US Pat. NO. 5,232,769).

Art Unit: 1796

Heibel et al. in view of Newell and Schilling render the composition of claim 1 obvious as set forth above. Heibel et al. further teaches the composition comprises vitamins ([0018]).

Heibel et al. does not teach the composition comprising vitamin E. However, Yamato et al. teaches microcapsules for laundry applications comprising vitamin E (1:1-20). Heibel et al. and Yamato et al. are analogous art because they are concerned with the same field of endeavor, namely microencapsulated benefit agents for laundry applications. At the time of the invention, a person of ordinary skill in the art would have found it obvious to use the vitamin E of Yamato et al. with the composition of Heibel et al. and would have been motivated to do so because Yamato et al. teaches that the vitamin E improves the physiological conditions of human skin (1:1-20).

Response to Arguments

Applicant's arguments filed August 11, 2009 have been fully considered but they are not persuasive.

Applicant argues that Heibel et al. do not teach or suggest the claimed limitation of an emulsifier in the liquid-phase and that Heibel et al. teach away from a suspending agent such as an emulsifier in either the free or the encapsulated fragrance oil. Furthermore, Applicant's argue that while Heibel et al. explicitly teaches the use of an emulsifier, such a use is not applied in the liquid-phase, but only in the micro encapsulation. However, as set forth in the Office Action mailed April 16, 2009 and above, Heibel et al. does explicitly teach and envision the use of emulsified perfume/active agents in a carrier liquid ([0037]). Heibel et al. further teach the microcapsules are made in the form of a slurry containing both free and encapsulated fragrance

Art Unit: 1796

([0030]-[0035]). Furthermore, it is noted that one of ordinary skill in the art would not read the teaching of Heibel et al. as to the absence of suspending agents ([0044]-[0045]) as a teaching to exclude emulsifiers. In [0045] Heibel et al. cites Munteanu et al. (US Pat. No. 4,464,271) to exemplify the use of suspending agents. It is clear through a reading of Munteanu et al. that suspending agents and emulsifiers are clearly not considered one in the same as Munteanu et al. teaches using a suspending agent as an addition to an already emulsified perfume (8:15-25). In addition, as Heibel et al. teaches that the encapsulated perfume is also without a suspending agent ([0045]), Heibel et al. cannot mean to exclude emulsifiers, as the encapsulated perfume is an emulsified perfume ([0037]).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 1796

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PETER F. GODENSCHWAGER whose telephone number is (571)270-3302. The examiner can normally be reached on Monday-Friday 7:30-5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on (571) 272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mark Eashoo/
Supervisory Patent Examiner, Art Unit 1796

/P. F. G./
Examiner, Art Unit 1796
November 10, 2009